IN THE TITLE

Please amend the title to read:

ANTIBODIES TO A HUMAN PHOSPHATIDYLINOSITOL 4,5-BISPHOSPHATE 5-PHOSPHATASE

IN THE SPECIFICATION

Please insert the following two paragraphs beginning at line 22 of page 3:

The invention also provides a method of preparing a polyclonal antibody with the specificity of an isolated human antibody which specifically binds to a polypeptide consisting of a polypeptide comprising the amino acid sequence of SEQ ID NO:1. This method comprises immunizing an animal with a polypeptide having an amino acid sequence of SEQ ID NO:1 under conditions to elicit an antibody response and screening for a polyclonal antibody which binds specifically to a polypeptide having an amino acid sequence of SEQ ID NO:1.

D1

The invention further provides a method of making a monoclonal antibody with the specificity of an isolated human antibody which specifically binds to a polypeptide consisting of a polypeptide comprising the amino acid sequence of SEQ ID NO:1. This method comprises immunizing an animal with a polypeptide having an amino acid sequence of SEQ ID NO:1 under conditions to elicit an antibody response and screening for a monoclonal antibody which binds specifically to a polypeptide having an amino acid sequence of SEQ ID NO:1.

Please replace the paragraph beginning at page 13, line 17 to page 14, line 3, with the following rewritten paragraph:

In one embodiment, the invention encompasses a polypeptide comprising the amino acid sequence of SEQ ID NO:1, as shown in Figures 1A-G. PBPP is 372 amino acids in length and has potential phosphorylation sites at S38, S132, T170, S183, T192, S275, S282, R295, S312, T329, T330, and S359. As shown in Figures 2A-E, PBPP has chemical and structural homology with a partial human phosphatidylinositol 4,5-bisphosphate 5-phosphatase (GI 1399105; SEQ ID NO:3), an

D2

inositol polyphosphate 5-phosphatase (GI 1019103; SEQ ID NO:4), and Lowe's oculocerebrorenal syndrome protein (GI 1420920; SEQ ID NO:5). Two potential catalysis or binding sites conserved among these related molecules are N104-D123 and D181-K200. PBPP has 124 unique residues 5' of the published sequence for the partial human phosphatidylinositol 4,5-bisphosphate 5-phosphatase; beyond residue F124, they share 64% identity. The lack of an isoprenylation motif suggests that PBPP

is a cytosolic enzyme. Northern analysis shows the expression of this sequence in various libraries, at least 31% of which are associated with inflammation or immune disorders, at least 26% are from immortalized or cancerous cells or tissues, at least 11% of are from fetal or infant tissues and at least 11% of which involve tissues of the neuronal tissues (Figures 3A-C) Of particular note is the association of PBPP with libraries undergoing or associated with cell proliferation.

Please replace the paragraph beginning at page 50, line 15, with the following rewritten paragraph:

PBPP that is substantially purified using PAGE electrophoresis (Sambrook, supra), or other purification techniques, is used to immunize rabbits and to produce antibodies using standard protocols. The amino acid sequence deduced from SEQ ID NO:1 is analyzed using DNASTAR software (DNASTAR Inc.) to determine regions of high immunogenicity and a corresponding oligopeptide is synthesized and used to raise antibodies by means known to those of skill in the art. Selection of appropriate epitopes, such as those near the C-terminus or in hydrophilic regions, is described by Ausubel et al. (supra), and others.